What is claimed is:

1. A volatile liquid storage tank pressure reduction system for reducing the volume of vapor present in the ullage of a storage tank that contains volatile liquid, comprising:

a conduit having an inlet port and an outlet port;

a valve connected inline to said conduit, said valve having a valve inlet and a valve outlet;

a pump and heat exchanger connected inline to said conduit downstream said valve outlet; and

an electronic controller electrically coupled to said valve to control the opening of said valve and electronically coupled to said pump to activate said pump, wherein said electronic controller is adapted to open said valve and activate said pump to draw vapor from the ullage of the storage tank through said inlet port to pass the vapor through said heat exchanger to cool the vapor and return the cooled vapor through said outlet port to the ullage of the storage tank.

2. The system of claim 1, further comprising a second valve coupled inline to an outlet of said heat exchanger, wherein said second valve is under control of said electronic controller and said second valve is opened to allow the vapor to return to the storage tank.

3. The system of claim 1, wherein said heat exchanger includes a fan to circulate outside air inside said conduit to cool the vapor.

4. The system of claim 1, further comprising a heat exchanger temperature sensor that measures the temperature of the vapor leaving said heat exchanger and inputs the temperature into said electronic controller.

5. The system of claim 1, further comprising a second heat exchanger sensor that measures the temperature of the vapor entering said heat exchanger and inputs the temperature into said electronic controller.

6. The system of claim 1, further comprising an ullage temperature sensor that measures the temperature of the storage tank and inputs the ulllage temperature into said electronic controller.

7. The system of claim 1, further comprising an ambient temperature sensor that measures the temperature of the outside air and inputs the ambient temperature into said electronic controller.

8. The system of claim 1, further comprising an ambient pressure sensor that measures the pressure of the outside air and inputs the ambient pressure into the electronic controller.

9. The system of claim 1, further comprising a storage tank pressure sensor that measures the pressure of the storage tank and inputs the storage tank pressure into said electronic controller.

10. The system of claim 9, wherein said electronic controller opens said valve and activates said pump if said storage tank pressure is greater than a preset pressure threshold.

11. The system of claim 10, wherein said electronic controller additionally activates said heat exchanger if said storage tank pressure is greater than said preset pressure threshold.

12. The system of claim 9, further comprising a volatile liquid temperature sensor that measures the temperature of the volatile liquid in the storage tank and inputs said volatile liquid temperature into said electronic controller, and an ambient temperature sensor that measures the temperature of the outside air, wherein said electronic controller also determines if the volatile liquid temperature is greater than the ambient temperature by a preset temperature value and opens said valve and activates said pump if said volatile liquid temperature is greater than said preset temperature value.

13. The system of claim 12, wherein said electronic controller additionally activates said heat exchanger.

14. The system of claim 9, further comprising a volatile liquid temperature sensor that measures the temperature of the volatile liquid and inputs said volatile liquid temperature into said electronic controller, a ullage temperature sensor that measures the temperature of the ullage and inputs said ullage temperature into said electronic controller, wherein said electronic controller closes said valve and deactivates said pump if said storage tank pressure is less than a pressure threshold, and either said volatile liquid temperature is not greater than a temperature preset value, said volatile liquid temperature is not greater than said ullage temperature, or said difference in temperature between said volatile liquid temperature and said ullage temperature is not greater than or equal to a second temperature preset value.

15. The system of claim 1, wherein said ullage further comprises a vent stack, wherein said vent stack has a vent stack inlet port and a vent stack outlet port, and wherein said vent stack outlet port is connected to a pressure relief valve coupled to atmosphere.

16. The system of claim 15, wherein said vent stack inlet port is fluidly connected to said inlet port and said vent stack outlet port is fluidly connected to said outlet port.

17. A volatile liquid storage tank pressure reduction system for reducing the volume of vapor present in the ullage of a storage tank that contains volatile liquid, comprising:

a conduit having an inlet port and an outlet port, wherein said conduit is in thermal contract with the air outside of the storage tank;

a valve connected inline to said conduit, said valve having a valve inlet and a valve outlet;

a pump connected inline to said conduit downstream said valve outlet; and

a electronic controller electrically coupled to said valve to control the opening of said valve and electronically coupled to said pump to activate said pump, wherein said electronic controller is adapted to open said valve and activate said pump to draw vapor from the ullage of the storage tank through said inlet port and pass the vapor through said conduit to cool the vapor and return the cooled vapor through said outlet port to the ullage of the storage tank.

18. The system of claim 17, further comprising a second valve coupled inline to an outlet of said heat exchanger, wherein said second valve is under control of said electronic controller and said second valve is opened to allow the vapor to return to the storage tank.

19. The system of claim 17, further comprising an ullage temperature sensor that measures the temperature of the storage tank and inputs the ulllage temperature into said electronic controller.

20. The system of claim 17, further comprising an ambient temperature sensor that measures the temperature of the outside air and inputs the ambient temperature into said electronic controller.

21. The system of claim 17, further comprising an ambient pressure sensor that measures the pressure of the outside air and inputs the ambient pressure into said electronic controller.

22. The system of claim 17, further comprising a storage tank pressure sensor that measures the pressure of the storage tank and inputs the storage tank pressure into said electronic controller.

23. The system of claim 22, wherein said electronic controller opens said valve and activates said pump if said storage tank pressure is greater than a predetermined pressure threshold.

24. The system of claim 22, further comprising a volatile liquid temperature sensor that measures the temperature of the volatile liquid in the storage tank and inputs said volatile liquid temperature into said electronic controller, and an ambient temperature sensor that measures the temperature of the outside air, wherein said electronic controller also determines if the volatile liquid temperature is greater than the ambient temperature by a preset threshold valve and opens said valve and activates said pump if said volatile liquid temperature is greater than said preset threshold value.

25. The system of claim 22, further comprising a volatile liquid temperature sensor that measures the temperature of the volatile liquid and inputs said volatile liquid temperature into said controller, a ullage temperature sensor that measures the temperature of the ullage and inputs said ullage temperature into said electronic controller, wherein said electronic controller closes said valve and deactivates said pump if said storage tank pressure is less than a pressure threshold, and either said volatile liquid temperature not greater than a temperature preset value, said volatile liquid temperature is not greater than said ullage temperature, or said difference in temperature between said volatile liquid temperature and said ullage temperature is not greater than or equal to a second temperature preset value.

26. The system of claim 22, further comprising a ullage temperature sensor that measures the temperature of the ullage and inputs said ullage temperature into said electronic controller, and an ambient temperature sensor the measures the temperature of the air outside the storage tank and inputs said ambient temperature to said electronic controller, wherein said electronic controller only opens said valve and activates said pump if said ambient temperature is less than said ullage temperature by more than a temperature preset value.

27. A system for reducing the pressure of a storage tank, comprising:

a storage tank that contains volatile liquid and has an ullage containing vapor;

a conduit having an inlet port and an outlet port, wherein both said inlet port and said outlet port are fluidly coupled to said ullage;

a valve connected inline to said conduit, said valve having a valve inlet and a valve outlet;

a pump and heat exchanger connected inline to said conduit downstream said valve outlet; and

an electronic controller electrically coupled to said valve control the opening of said valve and electronically coupled to said pump to activate said pump, wherein said electronic controller is adapted to open said valve and activate said pump to draw vapor from said ullage of said storage tank through said inlet port to pass said vapor through said heat exchanger to cool said vapor and return said cooled gas through said outlet port to said ullage of said storage tank.

28. The system of claim 27, further comprising a second valve coupled inline to an outlet of said heat exchanger, wherein said second valve is under control of said electronic controller and said second valve is opened to allow said cooled vapor to return to said storage tank.

29. The system of claim 27, wherein said heat exchanger includes a fan to circulate outside air inside said conduit to cool the vapor.

30. The system of claim 27, further comprising a heat exchanger temperature sensor that measures the temperature of the vapor leaving said heat exchanger and inputs the temperature into said electronic controller.

31. The system of claim 27, further comprising a second heat exchanger sensor that measures the temperature of the vapor entering said heat exchanger and inputs the temperature into said electronic controller.

32. The system of claim 27, further comprising an ullage temperature sensor that measures the temperature of said storage tank and inputs the ulllage temperature into said electronic controller.

33. The system of claim 27, further comprising an ambient temperature sensor that measures the temperature of the outside air and inputs the ambient temperature into said electronic controller.

34. The system of claim 27, further comprising an ambient pressure sensor that measures the pressure of the outside air and inputs the ambient pressure into the electronic controller.

35. The system of claim 27, further comprising a storage tank pressure sensor that measures the pressure of said storage tank and inputs said storage tank pressure into said electronic controller.

36. The system of claim 35, wherein said electronic controller opens said valve and activates said pump if said storage tank pressure is greater than a predetermined pressure threshold.

37. The system of claim 36, wherein said electronic controller additionally activates said heat exchanger if said storage tank pressure is greater than said preset pressure threshold.

38. The system of claim 35, further comprising a volatile liquid temperature sensor that measures the temperature of said volatile liquid in said storage tank and inputs said volatile liquid temperature into said electronic controller, and an ambient temperature sensor that measures the temperature of the outside air, wherein said electronic controller also determines if said volatile liquid temperature is greater than the ambient temperature by a preset temperature value and opens said valve and activates said pump if said volatile liquid temperature is greater than said preset temperature value.

39. The system of claim 38, wherein said electronic controller additionally activates said heat exchanger.

40. The system of claim 35, further comprising a volatile liquid temperature sensor that measures the temperature of said volatile liquid and inputs said

volatile liquid temperature into said controller, an ullage temperature sensor that measures the temperature of said ullage and inputs said ullage temperature into said electronic controller, wherein said electronic controller closes said valve and deactivates said pump if said storage tank pressure is less than a pressure threshold, and either said volatile liquid temperature not greater than a temperature preset value, said volatile liquid temperature is not greater than said ullage temperature, or said difference in temperature between said volatile liquid temperature and said ullage temperature is not greater than or equal to a second preset temperature value.

41. A system for reducing the volume of vapor present in the ullage of a storage tank, comprising:

a conduit containing a cooling media;

a radiator located inside the ullage of the storage tank, wherein said radiator is connected inline to said conduit;

a pump and heat exchanger connected inline to said conduit; and

an electronic controller that is electrically coupled to said pump to activate said pump, wherein said electronic controller is adapted to activate said pump and circulate said cooling media through said heat exchanger to cool said cooling media and circulate said cooling media through said radiator to cool the vapor in the ullage of the storage tank.

42. The system of claim 41, further comprising a second valve coupled inline to an outlet of said heat exchanger, wherein said second valve is under control of said electronic controller and said second valve is opened to allow said cooling media to circulate through said radiator.

43. The system of claim 41, wherein said heat exchanger includes a fan to circulate outside air inside said conduit to cool the vapor.

44. The system of claim 41, further comprising a heat exchanger temperature sensor that measures the temperature of the vapor leaving said heat exchanger and inputs the temperature into said electronic controller.

45. The system of claim 44, further comprising a second heat exchanger sensor that measures the temperature of said cooling media entering said heat exchanger and inputs the temperature into said electronic controller.

46. The system of claim 41, further comprising an ullage temperature sensor that measures the temperature of the storage tank and inputs the ulllage temperature into said electronic controller.

47. The system of claim 41, further comprising an ambient temperature sensor that measures the temperature of the outside air and inputs the ambient temperature into said electronic controller.

48. The system of claim 41, further comprising an ambient pressure sensor that measures the pressure of the outside air and inputs the ambient pressure into the electronic controller.

49. The system of claim 41, further comprising a storage tank pressure sensor that measures the pressure of the storage tank and inputs the storage tank pressure into said electronic controller.

50. The system of claim 49, wherein said electronic controller opens said valve and activates said pump if said storage tank pressure is greater than a preset pressure threshold.

51. The system of claim 50, wherein said electronic controller additionally activates said heat exchanger if said storage tank pressure is greater than said preset pressure threshold.

52. The system of claim 49, further comprising a volatile liquid temperature sensor that measures the temperature of the volatile liquid in the storage tank and inputs said volatile liquid temperature into said electronic controller, and an ambient temperature sensor that measures the temperature of the outside air, wherein said electronic controller also determines if the volatile liquid

temperature is greater than the ambient temperature by a preset threshold valve and opens said valve and activates said pump if said volatile liquid temperature is greater than said preset threshold value.

53. The system of claim 52, wherein said electronic controller additionally activates said heat exchanger.

54. The system of claim 49, further comprising a volatile liquid temperature sensor that measures the temperature of the volatile liquid and inputs said volatile liquid temperature into said controller, a ullage temperature sensor that measures the temperature of the ullage and inputs said ullage temperature into said electronic controller, wherein said electronic controller closes said valve and deactivates said pump if said storage tank pressure is less than a pressure threshold, and either said volatile liquid temperature not greater than a preset temperature value, said volatile liquid temperature is not greater than said ullage temperature, or said difference in temperature between said volatile liquid temperature and said ullage temperature is not greater than or equal to a second preset temperature value.

55. A system for reducing the pressure of a storage tank, comprising:

a storage tank that contains volatile liquid and has an ullage containing vapor;

a conduit containing a cooling media;

a radiator located inside said ullage of said storage tank, wherein said radiator is connected inline to said conduit;

a pump and heat exchanger connected inline to said conduit; and

an electronic controller that is electrically coupled to said pump to activate said pump, wherein said electronic controller is adapted to activate said pump and circulate said cooling media through said heat exchanger to cool said cooling media and circulate said cooling media through said radiator to cool said vapor in said ullage of said storage tank.

56. The system of claim 55, further comprising a second valve coupled inline to an outlet of said heat exchanger, wherein said second valve is under

control of said electronic controller and said second valve is opened to allow said cooling media to circulate through said radiator.

57. The system of claim 55, wherein said heat exchanger includes a fan to circulate outside air inside said conduit to cool the vapor.

58. The system of claim 55, further comprising a heat exchanger temperature sensor that measures the temperature of said vapor leaving said heat exchanger and inputs the temperature into said electronic controller.

59. The system of claim 58, further comprising a second heat exchanger sensor that measures the temperature of said vapor entering said heat exchanger and inputs the temperature into said electronic controller.

60. The system of claim 55, further comprising an ullage temperature sensor that measures the temperature of said storage tank and inputs the ullage temperature into said electronic controller.

61. The system of claim 55 further comprising an ambient temperature sensor that measures the temperature of the outside air and inputs the ambient temperature into said electronic controller.

62. The system of claim 55 further comprising an ambient pressure sensor that measures the pressure of the outside air and inputs the ambient pressure into the electronic controller.

63. The system of claim 55, further comprising a storage tank pressure sensor that measures the pressure of said storage tank and inputs said storage tank pressure into said electronic controller.

64. The system of claim 63, wherein said electronic controller opens said valve and activates said pump if said storage tank pressure is greater than a preset pressure threshold.

65. The system of claim 64, wherein said electronic controller additionally activates said heat exchanger if said storage tank pressure is greater than a preset pressure threshold.

66. The system of claim 63, further comprising a volatile liquid temperature sensor that measures the temperature of the volatile liquid in said storage tank and inputs said volatile liquid temperature into said electronic controller, and an ambient temperature sensor that measures the temperature of the outside air, wherein said electronic controller also determines if the volatile liquid temperature is greater than the ambient temperature by a preset temperature value and opens said valve and activates said pump if said volatile liquid temperature is greater than said preset temperature value.

67. The system of claim 66, wherein said electronic controller additionally activates said heat exchanger.

68. The system of claim 63, further comprising a volatile liquid temperature sensor that measures the temperature of said volatile liquid and inputs said volatile liquid temperature into said electronic controller, a ullage temperature sensor that measures the temperature of said ullage and inputs said ullage temperature into said electronic controller, wherein said electronic controller closes said valve and deactivates said pump if said storage tank pressure is less than a preset pressure threshold, and either said volatile liquid temperature is not greater than a temperature preset value, said volatile liquid temperature is not greater than said ullage temperature, or said difference in temperature between said volatile liquid temperature and said ullage temperature is not greater than or equal to a second temperature preset value.

69. A volatile liquid underground storage tank pressure reduction system for reducing the volume of vapor recovered during the refueling of a vehicle tank and returned to an underground storage tank in a service station environment, comprising:

an underground storage tank;

a conduit having an inlet port and an outlet port, wherein said outlet port is connected to said underground storage tank;

a fuel dispenser, comprising:

a nozzle,

a hose connected to said nozzle;

a fuel delivery line that couples to said hose and to said underground storage tank to deliver said liquid fuel through said hose and nozzle to the vehicle fuel tank;

a vapor pump;

a vapor return line contained within said hose that connects to said inlet port of said conduit;

a valve connected inline to said conduit, said valve having a valve inlet and a valve outlet;

a pump and heat exchanger connected inline to said conduit downstream said valve outlet; and

an electronic controller electrically coupled to said valve to control the opening of said valve and electronically coupled to said vapor pump to activate said vapor pump, wherein said electronic controller is adapted to open said valve and activate said vapor pump to recover vapor expelled from the vehicle tank during refueling to pass the vapor through said inlet port and through said heat exchanger to cool the vapor and return the cooled vapor through said outlet port to said underground storage tank.

70. The system of claim 69, further comprising a second valve coupled inline to said conduit downstream of an outlet to said heat exchanger that is opened by said electronic controller to allow said cooled vapors to return to said underground storage tank.

71. The system of claim 69, wherein said heat exchanger includes a fan to circulate outside air inside said conduit to cool the vapor.

72. The system of claim 69, further comprising a heat exchanger temperature sensor that measures the temperature of the vapor leaving said heat exchanger and inputs the temperature into said electronic controller.

73. The system of claim 69, further comprising an ullage temperature sensor that measures the temperature of said storage tank and inputs the ulllage temperature into said electronic controller.

74. The system of claim 69, further comprising an ambient temperature sensor that measures the temperature of the outside air and inputs the ambient temperature into said electronic controller.

75. The system of claim 69, further comprising an ambient pressure sensor that measures the pressure of the outside air and inputs the ambient pressure into said electronic controller.

76. The system of claim 69, further comprising a storage tank pressure sensor that measures the pressure of said storage tank and inputs said storage tank pressure into said electronic controller.

77. The system of claim 76, wherein said electronic controller opens said valve and activates said pump if said storage tank pressure is greater than a predetermined pressure threshold.

78. The system of claim 77, wherein said electronic controller additionally activates said heat exchanger if said storage tank pressure is greater than a preset pressure threshold.

79. The system of claim 76, further comprising a fuel temperature sensor that measures the temperature of the volatile liquid in said storage tank and inputs said fuel temperature into said electronic controller, and an ambient temperature sensor that measures the temperature of the outside air, wherein said electronic controller also determines if the fuel temperature is greater than the ambient temperature by a preset temperature value and opens said

valve and activates said pump if said fuel temperature is greater than said preset temperature value.

80. The system of claim 79, wherein said electronic controller additionally activates said heat exchanger.

81. The system of claim 76, further comprising a fuel temperature sensor that measures the temperature of the volatile liquid and inputs said fuel temperature into said electronic controller, an ullage temperature sensor that measures the temperature of said ullage and inputs said ullage temperature into said electronic controller, wherein said electronic controller closes said valve and deactivates said pump if said storage tank pressure is less than a pressure threshold, and either said fuel temperature is not greater than a temperature preset value, said fuel temperature is not greater than said ullage temperature, or said difference in temperature between said fuel temperature and said ullage temperature is not greater than or equal to a second temperature preset value.

82. A method of reducing the pressure of a storage tank, comprising the steps of:

drawing vapors from the ullage of the storage tank into an inlet of a conduit is in thermal contact with the outside air and wherein said conduit has an inlet and an outlet coupled to the ullage of the storage tank;

circulating said vapors through said conduit to create heat exchange between said vapors and the outside air; and

returning said vapors to the ullage of the storage tank by discharging said vapors through said outlet of said conduit.

83. The method of claim 82, further comprising the step of passing said vapors through a heat exchanger inline to said conduit to cool said vapors before said step of returning.

84. The method of claim 82, further comprising the step of opening a valve inline to said conduit to allow said vapors to be drawn into said conduit.

85. The method of claim 84, further comprising the step of passing said vapors through a heat exchanger inline to said conduit to cool said vapors before said step of returning.

86. The method of claim 85, further comprising the step of opening a second valve on the outlet side of said heat exchanger to allow said vapors to return to the ullage of the storage tank.

87. The method of claim 85, further comprising the steps of:

measuring the pressure of the storage tank;

measuring the temperature of volatile liquid stored in the storage tank; and

performing the step of passing said vapors through said heat exchanger if the temperature of the volatile liquid is less than the ambient temperature by more than a temperature preset value and if the pressure of the storage tank is above a pressure threshold.

88. The method of claim 87, further comprising the steps of:

measuring the temperature of the ullage;

measuring the temperature of the vapors exiting said heat exchanger; and

performing said step of opening said valve and drawing vapors through said conduit if the temperature of the ullage is greater than the temperature of vapors exiting said heat exchanger by a temperature preset value.

89. The method of claim 84, further comprising the steps of:

measuring the pressure of the storage tank;

measuring the temperature of volatile liquid stored in the storage tank; and

performing said step of opening said valve and said step of circulating the vapors if the temperature of the volatile liquid is greater than the ambient

temperature by more than a temperature preset value and if the pressure of the storage tank is above a pressure threshold

90. The method of claim 89, wherein said step of circulating said vapors further comprises the step of creating a vacuum inside said conduit.

91. The method of claim 84, further comprising the steps of:

measuring the temperature of the volatile liquid in the storage tank; and

closing said valve is the temperature of the volatile liquid is not greater than a temperature preset value.

92. The method of claim 91, further comprising the steps of:

measuring the temperature of the ullage of the storage tank; and

closing said valve if the temperature of the volatile liquid is not greater than the temperature of the ullage.

93. The method of claim 92, further comprising the steps of:

comparing the difference in temperature between the temperature of the volatile liquid and the temperature of the ullage;

closing said valve if the temperature of the volatile liquid is greater than the temperature of the ullage, but not by an amount greater than a temperature preset valve.

94. The method of claim 93, further comprising the steps of:

measuring the ambient temperature;

comparing the temperature of the volatile liquid to the ambient temperature; and

closing said valve if the temperature of the volatile liquid is not greater than the ambient temperature.

95. The method of claim 94, further comprising the step of activating a heat exchanger coupled inline to said conduit if difference between the temperature of the volatile liquid and the ambient temperature is not greater than a temperature preset value.

96. The method of claim 94, further comprising the step of activating a heat exchanger coupled inline to said conduit wherein said heat exchanger cools said vapors if the temperature of the volatile liquid is greater than the ambient temperature and the difference between the temperature of the volatile liquid and the ambient temperature is greater than a temperature preset value.

97. The method of claim 96, further comprising the steps of:

measuring the temperature of the vapors exiting said heat exchanger; and

opening said valve if the temperature of the vapors exiting said heat exchanger is less than the temperature of the ullage, and the difference in temperature between the temperature of the vapors exiting said heat exchanger and the temperature of the ullage is greater than a temperature preset value.

98. A method of reducing the volume of recovered vapors captured during the refueling of a vehicle, which are returned to an underground storage tank, comprising the steps of:

recovering vapors expelled from the vehicle during refueling;

passing said vapors through a vapor return passage and through a heat exchanger to cool said vapors; and

returning said vapors to the underground storage tank.

99. The method of claim 98, further comprising the step of opening a valve inline to said vapor return passage to allow said vapors to pass through said heat exchanger instead of directly to the underground storage tank.

100. The method of claim 99, further comprising the step of opening a second valve on the outlet side of said heat exchanger to allow said vapors to return to the ullage of the underground storage tank.

101. The method of claim 99, further comprising the steps of:

measuring the pressure of the underground storage tank;

measuring the temperature of the volatile liquid stored in the storage tank; and

performing the step of passing said vapors through said heat exchanger if the temperature of the volatile liquid is less than the ambient temperature by more than a temperature preset value and if the pressure of the underground storage tank is above a pressure threshold.

102. The method of claim 101, further comprising the steps of:

measuring the temperature of the ullage;

measuring the temperature of the vapors exiting said heat exchanger; and

performing said step of opening said valve and drawing vapors through said conduit if the temperature of the ullage is greater than the temperature of vapors exiting said heat exchanger by a temperature preset value.

103. The method of claim 98, further comprising the steps of:

measuring the pressure of the underground storage tank;

measuring the temperature of volatile liquid stored in the underground storage tank; and

performing said step of opening said valve and said step of circulating the vapors if the temperature of the volatile liquid is greater than the ambient temperature by more than a preset temperature value and if the pressure of the underground storage tank is above a preset pressure threshold.

104. The method of claim 103, wherein said step of circulating said vapors further comprises the step of creating a vacuum inside said conduit.

105. The method of claim 98, further comprising the steps of:

measuring the temperature of the volatile liquid in the underground storage tank; and

closing said valve if the temperature of the volatile liquid is not greater than a temperature preset value.

106. The method of claim 105, further comprising the steps of:

measuring the temperature of the ullage of the underground storage tank; and

closing said valve if the temperature of the volatile liquid is not greater than the temperature of the ullage.

107. The method of claim 106, further comprising the steps of:

comparing the difference in temperature between the temperature of the volatile liquid and the temperature of the ullage;

closing said valve if the temperature of the volatile liquid is greater than the temperature of the ullage, but not by an amount greater than a temperature preset value.

108. The method of claim 107, further comprising the steps of:

measuring the ambient temperature;

comparing the temperature of the volatile liquid to the ambient temperature; and

closing said valve if the temperature of the volatile liquid is not greater than the ambient temperature.

109. The method of claim 108, further comprising the step of activating a heat exchanger coupled inline to said conduit if difference between the temperature of the volatile liquid and the ambient temperature is not greater than a temperature preset value.

110. The method of claim 108, further comprising the step of activating a heat exchanger coupled inline to said conduit wherein said heat exchanger cools said vapors if the temperature of the volatile liquid is greater than the ambient temperature and the difference between the temperature of the volatile liquid and the ambient temperature is greater than a temperature preset value.

111. The method of claim 110, further comprising the steps of:

measuring the temperature of the vapors exiting said heat exchanger; and

opening said valve if the temperature of the vapors exiting said heat exchanger is less than the temperature of the ullage, and the difference in temperature between the temperature of the vapors exiting said heat exchanger and the temperature of the ullage is greater than a temperature preset value.